

CLAIMS

WE CLAIM:

1. A polypeptide selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4.
2. A nucleic acid having a nucleotide sequence selected from the group consisting of a polynucleotide that encodes a polypeptide selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4, SEQ ID NO:1, SEQ ID NO:3, a nucleic acid having at least about 80% nucleotide sequence identity to SEQ ID NO:1 or SEQ ID NO:3, and a nucleic acid that hybridizes under moderately stringent hybridization conditions to any of the foregoing.
3. A genetic construct comprising a polynucleotide of Claim 2 downstream from a heterologous promoter.
4. A host cell transfected with the genetic construct of Claim 3.
5. An antibody that specifically binds to a polypeptide of Claim 1.
6. A method for identifying modulators of expression of a polypeptide of Claim 1 or the polynucleotide of Claim 2, the method including the step of observing a change in the level of expression of the polypeptide or polynucleotide in a host cell after exposure of the host cell to a modulating agent.

7. A method for diagnosing a hepatocellular cancer in tumor cells from a liver of a human or non-human animal, the method comprising the steps of:

determining an expression level in the liver tumor cells of a polypeptide that is differentially expressed in cancerous liver tumor cells and regenerating liver cells, or of a polynucleotide encoding the polypeptide;

determining the expression level in regenerating liver tissue of the polypeptide or of the polynucleotide encoding the polypeptide;

diagnosing a hepatocellular cancer when the expression level in the liver tumor cells is higher than the expression level in the regenerating liver tissue.

8. A method as claimed in Claim 7 wherein at least one of the expression level determining steps comprises the step of specifically binding to the polypeptide an antibody directed to an epitope on the polypeptide.

9. A method as claimed in Claim 7 wherein at least one of the expression level determining steps comprises the step of hybridizing to cellular mRNA, under moderately stringent conditions, a nucleic acid molecule selected from the group consisting of a polynucleotide that encodes a polypeptide selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4, SEQ ID NO:1, SEQ ID NO:3, a nucleic acid having at least about 80% nucleotide sequence identity to SEQ ID NO:1 or SEQ ID NO:3, and an oligonucleotide that hybridizes under moderately stringent hybridization conditions to any of the foregoing, the nucleic acid molecule being of sufficient length to form a hybrid with the cellular mRNA.

10. A method as claimed in Claim 7, the polypeptide being selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4.

11. A kit comprising:

at least one of an antibody that binds specifically to a polypeptide selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4, and an oligonucleotide or a polynucleotide that hybridizes to a nucleic acid that encodes the polypeptide; and

at least one of a positive control and a negative control for evaluating a level of expression of at least one of the polypeptide and the nucleic acid that encodes the polypeptide in a sample.

12. A kit as claimed in Claim 11 wherein the positive control is selected from the group consisting of liver tumor cells, and an extract of liver tumor cells, the positive control having a predetermined level of expression of the polypeptide or the polynucleotide.

13. A kit as claimed in Claim 11 wherein the negative control is selected from the group consisting of non-tumor liver cells and an extract of non-tumor liver cells, the negative control having a predetermined level of expression of the polypeptide or the polynucleotide.

14. A kit as claimed in Claim 11, the kit comprising a polypeptide selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4.

15. A kit as claimed in Claim 11, the kit comprising a nucleic acid having a nucleotide sequence selected from the group consisting of a polynucleotide that encodes a polypeptide selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4, SEQ ID NO:1, SEQ ID NO:3, a nucleic acid having at least about 80% nucleotide sequence identity to SEQ ID NO:1 or SEQ ID NO:3, and a nucleic acid that hybridizes under moderately stringent hybridization conditions to any of the foregoing.